

Tell us about a time you built something awesome in code. How did you choose it? Why did you enjoy it?

I was talking to my friend who was taking an OS class and talked about how he had to build a shell - that gave me a pause. It didn't occur to me that the shell I use everyday was developed by people and I had an "of course"; I felt like the casual user who did not give much thought to the OS or anything really and how they came about. So when he brought it up I was intrigued. In addition, I've been meaning to learn C as my coworkers had expressed a disdain for C++, which I used for school. I started working on the shell, reading man pages on syscalls and reading up on how a shell functioned at a higher level. It was a lot of reading and researching but I enjoyed every bit - especially as it was on my own time and outside of class. It was certainly quite a change from my usual website/web app development. I have to say my appreciation for the developed shells (bash and especially zsh) is at an all time high now - making a simple shell was quite a lot of work of itself. In the end, I felt much more comfortable with writing and compiling C, which is a huge benefit itself. On top of that, I got a better look at the operation of shells and design decisions that the developers properly faced as well. All in all, it was immensely fun and I hope to go back to it soon to extend its minimal functionalities.

Why is hackNY right for you?

In the summer going into junior year, I participated in a program called NYC Generation Tech. During the summer, I would go on to learn to make a hybrid mobile application but more importantly I got to try on the shoes of an entrepreneur. We had lessons, guest speakers come and speak with us and most importantly we had to create an application and a business plan. We had to sell our creation. Those months were one of the most hectic and tiring months of my life as we stayed up past midnight making sure every line of the business plan was perfect and that the app worked as intended. But strangely enough, I didn't dread one second of it. In fact, it was exhilarating despite the exhaustion that I'd feel from it at times. In the moment, it seemed bad but looking back I can't help but feel it was actually fun and I learned tons. I want to get back into that place of innovation and enthusiasm for an idea or a product - what would be better than an actual startup? The drive to create and succeed in a startup is not comparable to anything and I've had a taste of it that summer. I don't plan on letting it go unsated - I want more of it and I'm sure that hackNY would allow me to do so. On top of that meeting like minded people would be a major benefit as well - maybe we will go on to start our own one day.

Tell us about what you hope to learn this summer.

This summer, I hope to gain an unfiltered view of the startup community. During NYC GenTech and everything that I've seen about entrepreneurship, it always has a rosy tint about it. We were in a classroom with successful entrepreneurs, but what about the

ones who still haven't made it - what makes them tick? What's it actually like out there - outside of this bubble of entrepreneurship preaching? Overall I just want to experience the energy of a startup first hand and to be a part of a creation of something. Along the way I'm sure to learn new technologies and skills but the main goal is expanding my entrepreneurial skills.

Starting this year, in an initiative led by our alumNY and reflecting their community values, all 2017 hackNY Fellows will participate in a project which promotes positive social impact, especially around increasing diversity and inclusivity in tech. Tell us about your experiences in volunteering for social good, why it is important to you, and what you would hope to accomplish with social good as a part of hackNY and beyond.

In high school I volunteered at a hospital, not because I wanted to be a doctor but just because. I worked at the front desk handing out visitor passes, escorting people, and occasionally delivering gifts. This was a major eye opener for me as I learned to be more tactful and try to be nicer and happier around people - the last thing you'd want is for a bad interaction if someone you know is in the hospital. Just by being a little positive, I was able to (hopefully) help and make other people not feel as bad. It may not have been a big deal but to me it was. It opened my mind to the fact that you're not everything in this world - there are other people too and some of those people might be better off than you but a lot of them aren't. For a few weeks, I'd see the same woman coming to visit her husband and yet she managed to give me a smile and thank me kindly each time. As part of hackNY, I want to work on the teen job market - I was lucky to get into a program which eventually led to a year round internship but I know that most aren't that lucky. They don't have the experience to work in a professional area but then they can't get it and it becomes a vicious cycle. I would want to be a mentor to some of them who are passionate about computer science and to help them get where they want. On top of that, I hope to work on an idea I had about bringing short term professional jobs to students so that they can earn some extra money and gain experience as well.

Is there a particular technology or industry you're currently interested in? How come? Where do you see it heading in the future?

I've been an avid follower of VR after my encounter with an anime called Sword Art Online. The premise rests in the fact that they have a headset, which they can put on and experience a fully immersive virtual reality. Now, as a gamer this excites me greatly. Suddenly you're not moving a mouse and tapping away at a keyboard but instead you're dodging bullets and dashing around. It's what anyone has wanted having played a game - there's always been a certain sense of disconnect. But the applications of VR would extend much further than just gaming - suddenly we're able to visit people across the globe "in person" at a moment's notice. This would allow easier family reunions, for a student to attend class from across the world, and maybe

to even have interviews. It might also be used as simulation practice for police officers, firefighters, soldiers, and even people of normal careers like mechanics. Suddenly, you won't need physical resources to practice your skills, just a virtual reality device. The possibilities are almost endless should we ever attain fully immersive VR.

Discuss your technical skills/proficiencies/languages and experience

I started off my programming experience with the web so I feel most comfortable with web: HTML, CSS, and JavaScript. In order to create a complex site these days one also needs knowledge of preprocessors, linters, build tools, and frameworks. I use SASS/SCSS in all of my projects as well as at my current internship. I use Pug (formerly Jade) as writing HTML gets tiring. As for JavaScript, I have minimal experience with CoffeeScript and TypeScript, opting to write plain JavaScript most of the time. I've used AngularJS (1.5) on the frontend with utility libraries like Lodash and jQuery. On the backend side of things, I use Node and ExpressJS for most of my projects but I do use Python and Flask at my internship. I have basic knowledge of databases and have used PostgreSQL, MySQL, and Redis. I've also gotten very familiar with testing through my internship (unit, integration, end to end) and have implemented it on some of my public packages. I've used nosetest for Python and Jasmine and Protractor with Selenium WebDriver for testing JavaScript and frontend. I also have minimal experience with Ops related stuff such as working with Docker, Docker compose, Heroku and AWS. I am currently working on a web application that will retrieve and calculate statistics from Pocket and display them. I am also working on a chrome extension to backup form data as a replacement of Lazarus. Outside of web development, I have been working on my C/C++ as I've found it to be fun working at a lower level. I hope to make an application with those languages and to contribute to NeoVim soon! I know basic shell and I am quite comfortable with the Linux command line - using both Windows and Linux (Ubuntu) as my daily drivers.

When you're not coding, what do you like to do?

I love reading but realized that I don't have as much time as I used to (or so I tell myself) so I've taken to saving tons of articles on Pocket and going through them whenever I have downtime. In a similar vein, I'll browse Reddit a lot; Some subs I browse are photography, programming, coolgithubprojects, webdev, overwatch. I'll save anything I find interesting from programming to politics. I am also a hobbyist photographer, going out to taking pictures from time to time. I also spent quite a bit of time customizing my Android device - reading up on XDA posts. Gaming is also quite high on the list - I was a huge CS:GO fan but haven't touched it in months since Overwatch was released. I really enjoy playing it with my friends! I also like to longboard and watch TV shows (The Blacklist, Mr. Robot, Silicon Valley, The 100). I think I spend way too much time browsing Soundcloud, Spotify, and YouTube for new music.

What sectors would you especially like to work in? (e.g., fashion, data science, media, art, education...)

I would like to work in media, art, development tools, social platforms, music, or even data.

What sectors would you prefer not to work in?

If I really had to name one I'd say fashion/beauty.

List five NYC startups you'd love to work at. If you're accepted, we'll do our best to match you with one of your favorites. If they're unavailable, we'll use this list to help make a great startup match for you.

Codecademy, Venmo, IrisVR, Frame.io, AppNexus

Any free text you'd like us to add when describing you to proposed host startups?

Paste in a ~100 line sample of code you're proud of.*

```
function retrieveLocal(username) {
  return db.User.findOne({
    where: {
      username: username
    }
  }).then((user) => {
    if (user.parsed_update < new Date(Date.now() - 2 * 1000 * 60 * 60 * 24))
  {
    debug('parsed data out of date, updating');

    let filePath = `./user_data/${user.hash}.json`;

    return new bluebird((resolve, reject) => {
      fs.readFile(filePath, 'utf8', (err, data) => {
        if (!err) {
          debug('retrieved local raw data');

          resolve({
```

```

        updated: false,
        user: user,
        parsed: false,
        data: JSON.parse(data),
        error: null
    });

    return;
}

reject({
    error: 'Unabled to read files',
    user: user
});
});
} else {
    return db.Stat.findOne({
        where: {
            username: username
        }
    }).then((stat) => {
        debug('retrieved local parsed data');

        return {
            updated: false,
            user: user.toJSON(),
            parsed: true,
            data: stat.toJSON(),
            error: null
        };
    }, () => {
        let filePath = `./user_data/${user.hash}.json`;

        return new bluebird((resolve, reject) => {
            fs.readFile(filePath, 'utf8', (err, data) => {
                if (!err) {
                    debug('retrieved local raw data');

                    resolve({
                        updated: false,
                        user: user,
                        parsed: false,
                        data: JSON.parse(data),
                        error: null
                    });
                }
            });
        });
    });
}

```

```

    });
    return;
  }
  reject({
    error: 'Unabled to read files',
    user: user
  });
});
});
}
}, () => {
  debug('user not found');

  return bluebird.reject({
    error: 'USER_NOT_FOUND'
  });
});
}

```

Tell us why you wrote this code and what it does.*

I wrote this as a part of the Pocket statistics app (Pocketistics) to handle retrieval of data for each user. First a little context: the Pocket API allows you to retrieve all the statistics for a user but it's not recommended and you can get rate limited so I decided that I would save the data and serve it myself. Next, I had trouble thinking about where to store the data - it was a massive JSON object that probably wouldn't require any relations - so I opted to store the file path in the system and use the file system as the database itself. However, that's only the raw data and the parsed and calculated statistics would be stored in a database for querying. Here, if the update was more than two days ago, it will automatically fetch the new files from Pocket and save it. There are other functions not shown to deal with the parsed data retrieval as well as getting the data from Pocket.

Please provide links and descriptions of two of your own best coding projects, in any language.*

https://github.com/jwoos/javascript_frotz

This was written in order to be able to make a Slack Zork bot (for fun at work). It wraps the dfrotz (dumb frotz - the version without ncurses) binary with NodeJS calls to make it usable from a Node script without boilerplate code.

https://github.com/jwoos/c_shell

I wrote a simple C shell with very basic argument parsing - no support for quotations at all. It also does not support piping and job control - it was a very simple shell to learn more about shells and C - implementing minimal builtins and just command execution.

Please share anything else you'd like to share about yourself.

I am currently working at a startup in Grand Central Tech Build as an intern, having been here for more than a year now. I came in not knowing that much and I learned tons about production environment and how it is to work at a company compared to just working on my own projects. I am aware that I might not have a portfolio or resume as good as others might, but I am fully willing to commit the time and energy to make up for the gap. It wouldn't be a burden and I would actually enjoy the challenge!